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ACCESSION NR: AP4009083 & C S/0056/63/045/006/1693/1703

AUTHORS: Burgov, N. A.; Danilyan, G. V.; Dolbilkin, B. S.; Laza-reva, L. Ye.; Nikolayev, F. A.

TITLE: Cross section for absorption of Gamma quanta by carbon nuclei in the giant resonance region

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 45, no. 6, 1963, 1693-1703

TOPIC TAGS: carbon nucleus, gamma absorption cross section, giant resonance, nuclear absorption, nuclear absorption cross section, integral cross section

ABSTRACT: In order to gain additional information about the highlying excited levels of carbon, the cross section for nuclear absorption of γ rays by carbon was measured by the absorption method in the 13--27 MeV region, using the 250-MeV synchrotron of the

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ACCESSION NR: AP4009083

Fizicheskiy institut AN SSSR (Physics Inst. AN SSSR) and a pair magnetic spectrometer as the γ detector. The cross section curve has five peaks at 16.5, 17.6, 19.1, 23, and 25.6 MeV. The measured clared nuclear absorption cross section in the giant resonance region is compared with theoretical calculations and with experimental photonucleon spectra and cross sections for the $C^{12}(\gamma, n)$ and $C^{12}(\gamma, p)$ reactions in the same energy region. The integral cross section in this region is found to be 84 \pm 10 MeV-mb and comprises about one-half the value calculated from the sum rule, indicating that in the case of carbon the giant resonance region below 30 MeV includes approximately half of the integral cross section for dipole transitions. "We wish to thank N. S. Kozhevnikov for much assistance with the measurement and data reduction, and B. A. Tulupov for numerous profitable discussions." Orig. art. has: 2 figures, 6 formulas, and 3 tables.

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Card 2/3

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ASSOCIATION: Insuitu	ical and Experimental Phys	sics): Fizicheskiv
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AUTHORS:

Abrikosov, N.Kh., Dyul'dina, K.A., Danilyan, T.A. 30778-3-7-29/44

TITLE:

Investigations of the System SnTe PbTs (Issledovaniye sistemy

Smle-Pble)

APPROVED FOR RELEASE: 08/25/2000

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 7, pp 1632-1636

(USSR

ABSTRACT:

The diagram of state and the thermoelectric properties of the system SnTe-PbTe, in which isomorphic compounds are formed, were investigated. In the township system Pb-Sn-Te continuous series of solid solutions form on the sector SnTe-PbTe. The electric conductivity and the thermoelectric conductivity of the alloys produced from SnTe and PbTe have the same type of conductivity. Modification of the properties of alloys produced from SnTe and PbTe is complicated. Alloys which are enriched with SnTe have a maximum of thermoelectric conductivity of positive value, but alloys enriched with PbTe have a thermoelectric conductivity of negative value. Electric conductivity passes through a minimum. There are 7 figures, 2 tables and 13 references.

Card 1/2

CIA-RDP86-00513R000509710009-0"

Investigations of the System SmTe-PoT:

307/78-3-7-29/44

SUBMITTED:

Juna 26, 1957

1. Lend-tellerium-tin systems—Analysis 2. Lend-tellerium-tin systems—Electrical properties 3. Lend-tellerium-tin systems—Tomporature factors

Card 2/2

YAKZHIN, Aleksendr Andreyevich; KUZ'MENKO, V.I., retsenzent; red.; DANIL'YANETS,
A.A.; retsenzent; ZONTOV, N.S., retsenzent; PETRENKO, Ye.Ye.,
retsenzent; ZEDOTOVA, A.I., red.izd-ve; GUROVA, O.A., tekhn.red.

[Prospecting for uranium deposits] Poiski i razvedka uranovykh mestoroshdenii. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. 1961. 479 p. (HIRA 14:4)

(Uranium ores)

SKVORTSOV, Aleksey Anatol'yevich; KOLESINA, Antonina Matveyevna; DANIL'YANTS, Svetlana Alekseyevna; PETUSHKOVA, I.K., red.

[Ways to improve the operational reliability of the insulation of the windings of electric traction motors] Puti po-vysheniia ekspluatatsionnoi nadezhnosti izoliatsii obmotok tiagovykh elektrodvigatelei. Moskva, Izd-vo "Transport," 1964. 28 p. (MIRA 17:8)

USSR/General Problems of Pathology - Tumors. Human Tumors.

υ.

Abs Jour

: Ref Zhur - Biol., No 2, 1959, N 8897

Author

: Danil'yants, Ye.I.

Inst

: Uzbekistan Scientific Research Cutaneous-Venereological

Institute

Title

: The Problem of Lymphangions and Cutaneous Lymphangiec-

tasias

Orig Pub

: Sb. tr. Uzbekist. n.-i. kozhno-venerol. in-ta, 1957, 6,

197-201

Abstract

: Four women are reported on in 2 of which there were lymphangions and lymphangiectasias existing simultaneously; in 2, only lymphangiestasias. Localization of the eruptions was chiefly on the sexual organs; in 3 patients elephantiasis developed. In one of these patients (age 24) cancer developed subsequently at the

Card 1/2

USSR/Human and Imital Physiology. Metabolism.

T

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92962.

Author : Danil'yants, Ye. I.

Inst : Uzbek Scientific Research Denno-Venereological Institute.

Misse : Concentration of Ascorbic Acid in the Spinal Fluid,

Blood, and Urine of Healthy Individuals and Patients with

Syphilis of the Hervous System.

Orng Fub: Sb. tr. Uzbekast. n. .. hozhno-venerol. an-ba, 1957, 6,

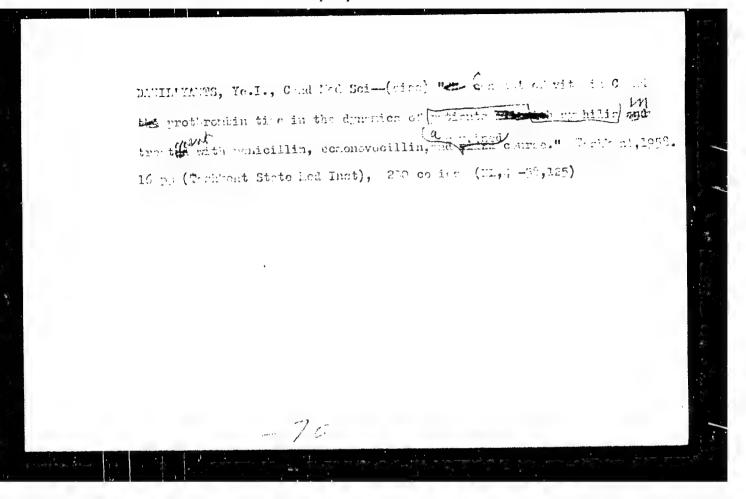
327-330.

Abstract: Ascorbic acid (1) determinations were carried out in the

blood, urine, and CJF of 55 individuals suffering from syphilis, subject to discharge from the change following recovery, and of 35 patients with ranifestal one of neurosyphilis. There was a normal amount of I in the CSF of healthy people and of patients who had syphilatic involve-

Card : 1/2

DANIL'YAM'S, Ye.I., assistent Fluctuation of vitamin C content and prothrombin time in syphilis [with summary in English]. Vest.derm. i ven.31 no.6:41-43 M-D '57. (MIRA 11:3) 1. Is kefedry koshnykh i venericheskikh bolesney Tashkentskogo gosudarstvennogo meditsinskogo instituta (zav. - doktor meditsinskikh nauk prof. A.A.Akovbyan) (VITAMIN C, metab. in syphilis) (PROTHEMBIN TIME, in various dis. syphilis) (SYPHILIS prothrombin time & vitamin C metab.)



BROGA, L.; DANILYAVICHYUS, E. [Danilevicius, E.]; GLIBAUSKAYTE, M.,
[Glibauskaite, M.], red.; MEDONIS, A., red.; CHECHITE, V.
[Cecite, V.], tekhm. red.

[Tourist map of the Lithuanian S.S.R.] Turistskaia karta
Litovskoi SSR. Vil'nos, Gos.izd-vo polit. i nauchn. litLitovskoi SSR, 1963. 72 p.

(MIRA 17:4)

DANILYCHEV, I.A.; PLANCVSKIY, A.N.; CHEKHOV, O.S.

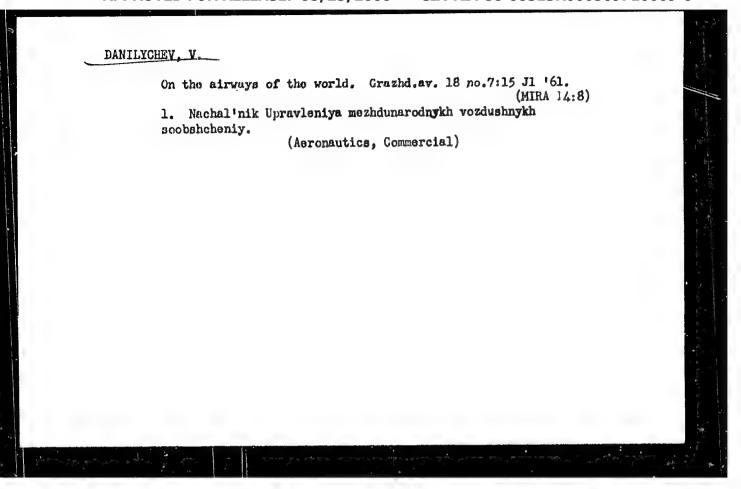
Study of mixing on sieve trays and methodology for the design

Study of mixing on sieve trays and methodology for the design of tray mass exchange apparatus. Khim. prom. no.6:461-465 Je 164. (MIRA 18:7)

l. Moskovskiy institut khimicheskogo mashinostroyeniya.

DANILYCHEV, I.A.; PLANOVSKIY, A.N.; CHEKHOV, O.S.

Studying mass transfer in the liquid phase on sieve plates taking the degree of longitudinal mixing into account. Khim. prom. 41 no.10:766-769 0 '65. (MIRA 18:11)



DANILYCHEV, V., nachal'nik.

In the air lanes of China. Kryl.rod. 4 no.10:21-22 0 '53. (MLRA 6:10)

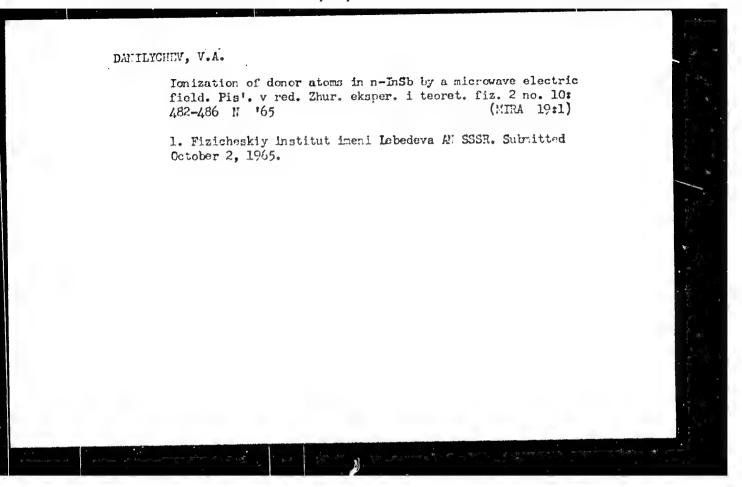
1. Upravleniye meshdunarodnykh vosdushnykh soobshcheniy Grashdanskogo Vozdushnogo Flota SSSR.

(China--Aeronautics, Commercial) (Aeronautics, Commercial--China)

DANILYCHEV, V.A.; KARLOV, N.V.; OSIPOV, B.D.; SHIRKOV, A.V.; SHLIPPE, G.I.

Magnetic resistance used in field measurements at helium temperatures. Prib. i tekh. eksp. 8 no.5;221 S-0 '63. (MIRA 16:12)

1. Fizivheskiy institut AN SSSR.



	8
L 18007-63 EWP(q)/EWT(m)/BDS APPTC/ASD JD S/0181/63/005/006/1724/1727	Aug.
ACCESSION NR: AP3001297	2.5
AUTHORS: Strukov, B. A.; Danslyscheval M. N.	CANAL AND
TITLE: Thermal capacity of acid ammonium sulfate in the temperature interval from -70 to #14C	
SCURCE: Fizika tverdogo tela, v. 5, no. 6, 1963, 1724-1727	
TOPIC TAGS: thermal capacity, ammonium sulfate, Curie point, calorimeter	The state of the s
ABSTRACT: The authors measured the temperature dependence of thermal capacity in crystals of NH ₂ HSO ₄ by using an adiabiatic vacuum calcrimeter. Experimental data show a jump in the curve of temperature dependence on thermal capacity at a point near the Curie temperature (-2.55C). This jump does not appear on the theoretical curve relating the same two factors. This jump in the curve of observed values caused the authors to consider the effect of fluctuations in optimization and the irregularity of distribution of these fluctuations throughout the body of the crystal in the critical region. "In conclusion we express deep thanks to V. A. Koptsik, who suggested the idea of the present paper, A. A. Sklyankin and A. P. Levanyuk for useful discussions and valuable remarks. Cord 1/2	The property of the control of the c
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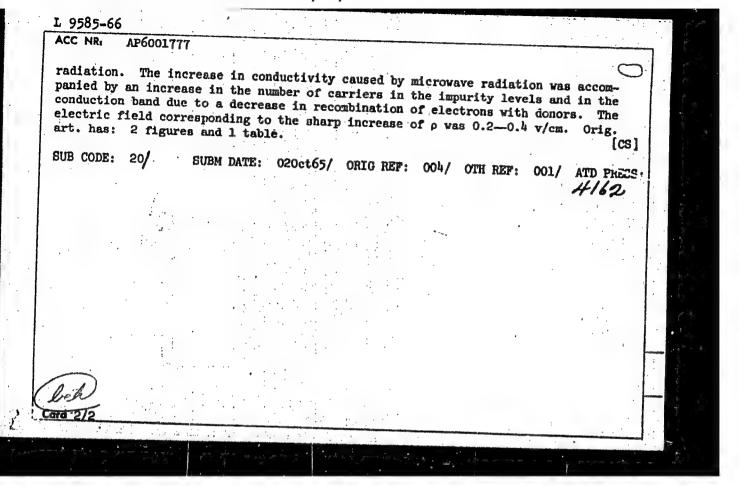
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DANILYCHEV, V.A.; OSIPOV, B.D.

Mechanismunderlying the effect of microwaves on the electroconductivity of n-InSb at low temperatures. Fiz. tver. tela 5 no.8:2369-2371 (MIRA 16:9)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR, Moskva.
(Indium antimonide—Electric properties) (Microwaves)

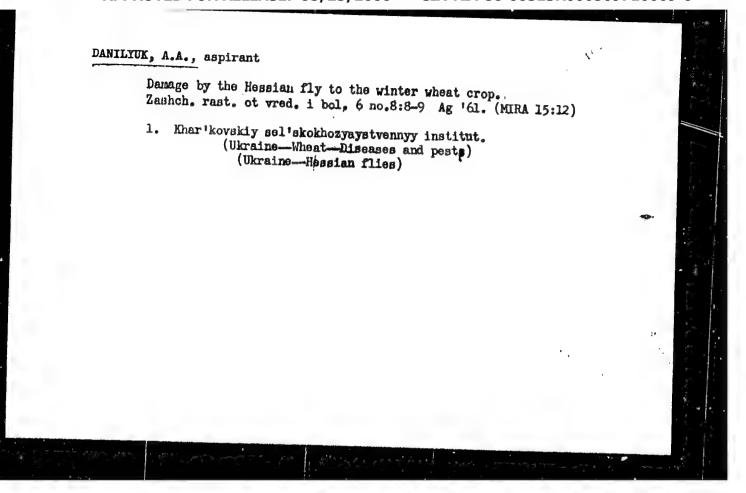
L 9585-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) ACC NRI AP6001777 SOURCE CODE: UR/0386/65/002/010/0482/0486 AUTHOR: Danilychev, V. A. B 44,55 ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences, SSSR (Fizicheskiy institut Akademii nauk SSSR) TITLE: Ionization of donors in n-InSb by a microwave field SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 10, 1965, 482-486 TOPIC TAGS: indium antimonide, semiconductor carrier, electrical conductivity, Hall constant, election down, microurere, electric field, magnetic field ABSTRACT: The effect of a microwave electric field at the 10-mm wavelength on the electrical conductivity (ρ) of n-type InSb was investigated in a magnetic field of 3 koe. The conductivity in the impurity band was distinguished from the free carrier conductivity by performing the experiments at 4.2 and at 1.1K. In high-purity samples with low ρ (ND - NA = 1.1 x 10¹³) the Hall constant (RH) decreased sharply with an increase of the microwave power after the power reached a certain value. The decrease of RH was greater at low temperatures, approaching a limit at 77K. As the microwave power was increased, an increase in p was observed simultaneously with the decrease of RH (and long before RH reached the critical value). It was established that the temperature of the samples did not increase during exposure to microwave 1/2



LAVNIKOVA, G.A.; DANIYEL'-BEK, K.V. (Moskva)

Embryonic lipomas; myxoid, embryonic liposarcomas, myxosarcomas, and Gilmour's mesenchymomas. Arkh. pat. 27 no.8:36-43 *65.

1. Patologosnatomicheskoye otdeleniye (zav. 7.V.Gol'bert) i khirurgicheskoye otdeleniye (zav. - doktor med.nauk A.F. Bazhenova)
Nauchnc-issledovatel'skogo onkologicheskogo instituta imeni Gertsena (dir. - prof. A.N.Novikov).

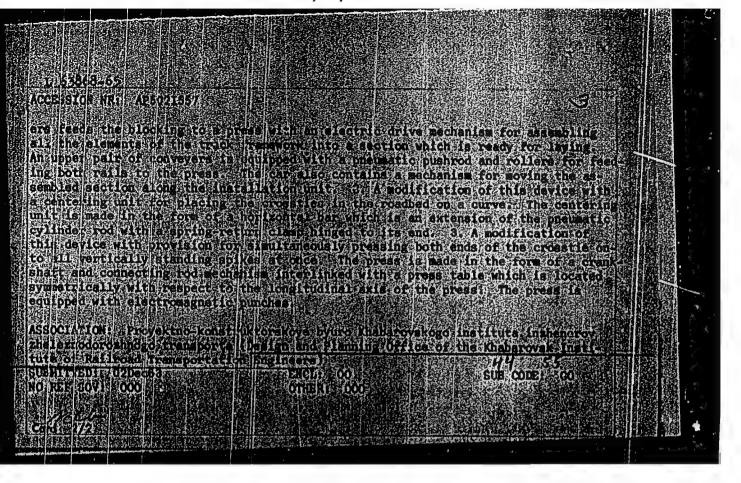


DANILYUK, A.A., osmotrshchik

Improve the inspection of axle equipment. Zhel. dor. transp.
47 no.5:83 My '65. (MIRA 18:6)

1. Punkt tekhnicheskogo osmotra, stantsiya Yevgen'yevka
Dal'nevostochnoy dorogi.

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Carlo D.//L			



DANILYUK, A.M., dotsent, kandidat tekhnicheskikh nauk; KOROYEV, Yu.I., with tekhnicheskiy redaktor; GORSHKOV, A.P., redaktor; SMOL'YAKOVA, M.V., tekhnicheskiy redaktor.

[Drawing in perspective directly from given dimensions] Postroenie perspektiv neposredstvenno po sadannym rasmeram. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954. 126 p.(MLRA 7:8) (Perspective) (Geometrical drawing)

Card 1/1 Pub. 41-10/17

FD-1129

Author

Danilyuk, A. M., Kuybyshev

Title

: Calculation of settling of foundation on layered strata of soil

Periodical

: Izv. AN SSSR. Otd. tekh. nauk 6, 87-96, Jun 1954

Abstract

: Describes an approximate method, based on usual assumptions, for calculating the settling of rigid foundations on both layered soil and on a layer of soil underlaid by rock. Graph; tables. Six refer-

ences.

Institution : Hydraulic Engineering Institute

Submitted

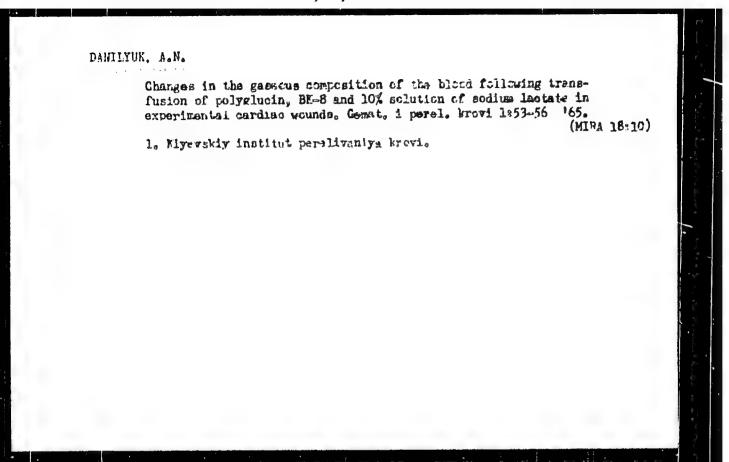
: March 27, 1954

DANILYUK, Aleksey Mikhaylovich, dots., kand. tekhn. nauk;

KMASHYIV, G.P., red.

[New method of indicating perspective] Novyi metod postroeniia perspektiv; metodicheskoe posobie. Kuibyshev, Kuibyshevskii inzhenerno-stroitel nyi in-t, 1961. 45 p.

(MRA 17;3)



Means of reducing the clogging of spinnerets. Knim.volok. no.4:61-62 '59. (MIRA 13:2) 1. Kalininskiy kombinat. (Rayon spinning)

DANILYUK, I.A.; RASSIN, L.Ye., inzh.-konstruktor; PRONINA, L.N., mladshiy nauchnyy sotrudnik; SHEYNERMAN, Ye.M., starshiy nauchnyy sotrudnik

Apparatus for determining the permeability to air of textile fabrics. Tekst.prom. 21 no.12:68-69 D '61. (MIRA 15:2)

1. Rukovoditel' grupty konstruktorskogo byuro zavoda Tekstil'pribor (for Danilyuk). 2. Zavod Tekstil'pribor (for Retsin). 3. TSentral'nyy nauchno-issledovatel'skiy institut khlopchatobumazhnoy promyshlennosti (for Pronina, Sheynerman).

(Textile fabrics--Testing)
(Manometer)

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000509710009-0

SHEYNERMAN, Yo.M.; DANILYUK, I.A.; RASCIN, L.Yo.; FRONINA, L.N.

Determining the permeability to air of textile fabrics on the universal "SFV" apparatus. Nauch.-isul.trudy TSMIRHEI '60 [publ. '62]:209-216.

(MIRA 18:2)

DANILYUK, I.D., zasluzhennyy vrach USSR

"Dispensary care of the rural population." Collection of works of the Vinnitsa Medical Institute and of practicing physicians of Vinnitsa Province. Edited by L.G.Lekarev. Reviewed by I.D.Daniliuk. Sov. zdrav. 20 no.7:85-88 '61. (MIRA 15:1) (DISPENSARLS) (LEKAREV, L.G.)

DANILYUK, I.G.

Blood transfusion to children in a rural district hospital. Vop. okh.mat. i det. 1 no.5:85-88 S-0 '56. (MLRA 9:11)

1. Iz Komsomol'skoy rayonnoy bol'nitsy (glavnyy wrach I.G.Danilyuk) Vinnitskaya oblast'. (BLOOD--TRANSFUSION) (CHILDREN--DISEASES)

DANILYUK, I.G.

Prevention ofpostoperative mortality. Khirurgiia 32 no.12:73-74 D '56. (MLRA 10;2)

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000509710009-0

DANILYUK, I.G. (selo Komsomol'skoye Vinnitskoy oblasti)

Feldsher's role in the prevention and trestment of hernia. Fel'd.
i skush. 22 no.8:46-48 Ag '57. (MIRA 10:12)

(HERNIA) (PUBLIC HEALTH, RURAL)

"APPROVED FOR RELEASE: 08/25/2000 CIA-RI

CIA-RDP86-00513R000509710009-0

DANILYUK, I.G.

Call bladder calculus of rere size. Vest.khir. 79 no.8:120-121
Ag '57. (MIRA 10:10)

1. Iz Komaomol'skoy rayonnoy bol'nitsy Vinnitskoy oblasti (gl.vrach
I.G.Danilyuk). Adres avtora: selo Komaomol'skoye, Vinnitskoy oblasti rayonnaya bol'nitsa.

(CHOLELITHIASIS, case reports
calculus of unusually large size)

DANILYUK, I.G.

Importance of blood transfusion in pediatric practice in rural hospital conditions. Sevened: 22 no.11:134-137 N 58 (MIRA 11:11)

1. Glavnyy vrach Komsomol'skoy rayonnoy bol'nitsy Vinnitskoy oblasti.
(BLOOD TRANSFUSION, in various dis.
pediatric dis. in rural hosp. (Rus))
(PEDIATRIC DISEASES, ther.
blood transfusion in rural hosp. (Rus))

DANILYUK, I.G., saslyzhenyy vrach USSR.

Rehabilitation and prevention of mortality in cases of hernias in rural districts. Thirurgiia 34 no.7:127-129 J1'58 (NRA 11:9)

l. Iz Komsomol'skoy rayonnoy bol'nitsy (glavnnyy vrach - zaslyzhennyy vrach USSR I.G. Danilyuk) Vinnitskoy oblasti.

(HERNIA, therapy

rehabil. & prev. of mortal. in rural areas (Rus))



DANILYUK, I.G., zasluzhennyy vrach UkrSSR (Komsomol'skoye, Vinnitskoy obl.)

"Stomach hemorrhages and their surgical treatment" by B.S. Rozanov.
Reviewed by I.G. Daniliuk. Klin.khir. no.6188-89 Je '62.

(MIRA 1613)

(STOMACH—SURGERY) (GASTROINTESTINAL HEMORRHAGE)

(ROZANOV, B.S.)

"APPROVED FOR RELEASE: 08/25/2000 CIA-F

CIA-RDP86-00513R000509710009-0

Additive Set Functions. Danilyuk, I. I. (L'vov). Quasi-analytic Functions of Many Variables on Manifolds. Dzhrbashyan, M. M. (Yerevan). On the Weighted Polynomial Approximations in Complex Regions. Dzyadyk, V. K. (Lutsk). Precise Evaluation of the Best Approximations for a Class of Periodical Functions. 80-82 There are 2 references, both of them USSR. Dzyadyk, V. K. (Lutsk). On Approximations by Polynomials of Non-periodical Functions Satisfying the Condition Lip \(\lambda \left(\lambda \	Call Nr: AF 1108825 Transactions of the Third All-union Mathematical Congress (Cont.) Moscow, Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp. Gladkiy, A. V. (Barnaul). On the Effectively Unbounded		
Many Variables on Manifolds. Dzhrbashyan, M. M. (Yerevan). On the Weighted Polynomial Approximations in Complex Regions. Dzyadyk, V. K. (Lutsk). Precise Evaluation of the Best Approximations for a Class of Periodical Functions. There are 2 references, both of them USSR. Dzyadyk, V. K. (Lutsk). On Approximations by Polynomials of Non-periodical Functions Satisfying the Condition Lip \(\lambda \lambd	Additive Set Functions.		
Approximations in Complex Regions. Dzyadyk, V. K. (Lutsk). Precise Evaluation of the Best Approximations for a Class of Periodical Functions. 80-82 There are 2 references, both of them USSR. Dzyadyk, V. K. (Lutsk). On Approximations by Polynomials of Non-periodical Functions Satisfying the Condition Lip \(\times \lambda \lambd	Danilyuk, I. I. (L'vov). Quasi-analytic Functions of Many Variables on Manifolds.	79-80	
Approximations for a Class of Periodical Functions. 80-82 There are 2 references, both of them USSR. Dzyadyk, V. K. (Lutsk). On Approximations by Polynomials of Non-periodical Functions Satisfying the Condition Lip \(\times \left(\sqrt{\sq}	Dzhrbashyan, M. M. (Yerevan). On the Weighted Polynomial Approximations in Complex Regions.	80	
Dzyadyk, V. K. (Lutsk). On Approximations by Polynomials of Non-periodical Functions Satisfying the Condition Lip $\propto (\mathcal{O} < < /)$. 82-83 Mention is made of Bernshteyn, S. N., Nikol'skiy, S. M. and Timan, A. F.	Dzyadyk, V. K. (Lutsk). Precise Evaluation of the Best Approximations for a Class of Periodical Functions.	80-82	
of Non-periodical Functions Satisfying the Condition Lip \(\lambda \lambda \lambda \lambda \lambda \rangle \lambda \lambda \rangle \lambda \lambda \rangle \rangle \lambda \rangle \rangle \lambda \rangle \r	There are 2 references, both of them USSR.		
and Timan, A. F.	of Non-periodical Functions Satisfying the Condition	82-83	
	and Timan, A. F.		

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DANILYUK, 1.1. DANILYUK, I.I.

SUBJECT

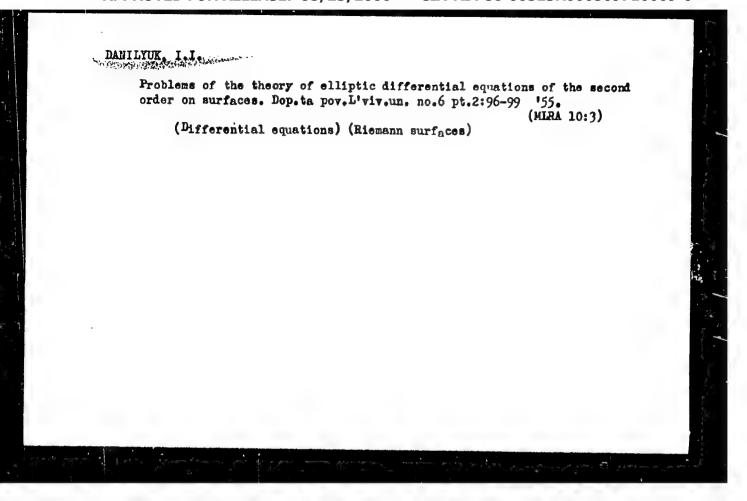
USSR/MATHEMATICS/Theory of functions CARD 1/1

AUTHOR TITLE DANILJUK I.I. Quasiharmonic and quasianalytic functions on surfaces.

PERIODICAL Uspechi mat. Nauk 11, 5, 95-101 (1956)

reviewed 5/1957

As is well-known, complex-valued functions the real and imaginary parts of which yield solutions of elliptic systems with two independent variables, possess certain properties which are similar to those ones of analytic functions. The author studies how far this local analogue remains in the large and he investigates in this connection the solutions of the mentioned elliptic systems on certain surfaces which are defined as two-dimensional orientable topological manifolds with restricting properties. The author obtains a maximum principle and a Harnack principle. Some theorems concern Hilbert spaces of quasi-analytic functions and the quasiconformal mappings of surfaces. A great part of the present results has already been announced (Doklady Akad.Nauk 105, No.1 (1955)).

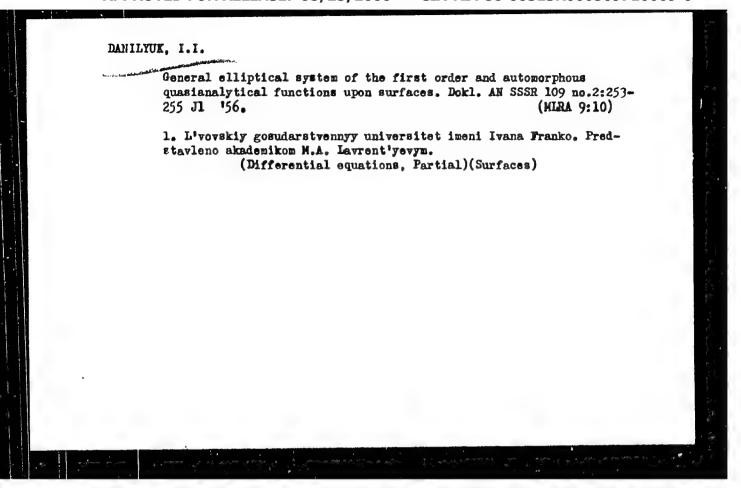


DANILYUK, I.I.

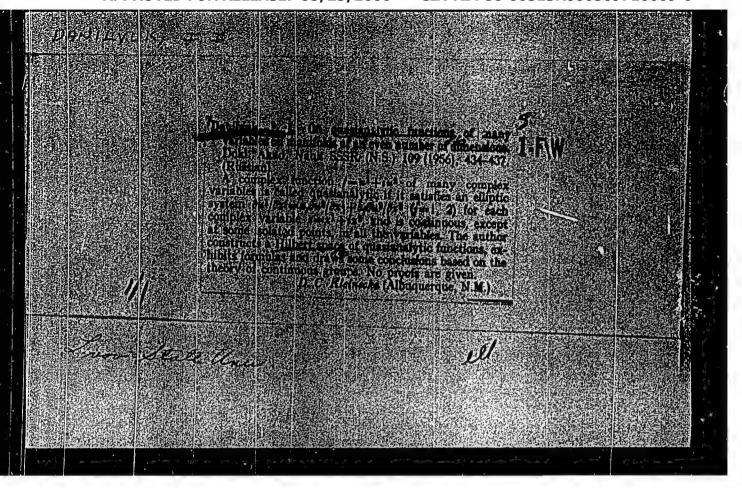
Integral representations of solutions of certain elliptical systems of the first order upon surfaces and their use in the theory of thin shells. Dokl. ZN SSSR 109 no.1:17-20 J1-Ag '56. (MIRA 9:10)

1. L'vovskiy gosudarstvennyy universitet imeni Ivana Franko. Predstavleno akademikom M.A. Lavrent'yevym.
(Differential equations, Partial) (Elastic plates and shells)

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SUBJECT USSR/MATHEMATICS/Theory of functions CARD 1/1 PG - 939
AUTHOR DANILIUK I.I.

TITLE On automorphic quasianalytic functions on surfaces.

Mat.Sbornik,n.Ser. 41, 97-104 (1957)

reviewed 7/1957

A representation of the contents of this paper was already published in Doklady Akad.Nauk 109, 253-255 (1956).

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000509710009-0

AUTHOR:

Danilyuk, I.I.

SOV/20-120-1-3/63

TITLE:

On the Mappings Which Correspond to the Solutions of Equations of Elliptic Type (Ob otobrazheniyakh, sootvetstvuyushchikh resheniyam uravneniy ellipticheskogo tipa)

PERIODICAL: Doklady Akademii nauk, 1958, Vol 120, Nr 1, pp 17-20 (USSR)

ABSTRACT:

Let the elliptic system

(1)
$$u_x - v_y = a(x,y)u + b(x,y)v$$
; $u_y + v_x = c(x,y)u + d(x,y)v$

be given of the elliptic equation

$$A_{1}(x,y) \frac{\partial^{2} v}{\partial x^{2}} + 2B_{1}(x,y) \frac{\partial^{2} v}{\partial x \partial y} + C_{1}(x,y) \frac{\partial^{2} v}{\partial y^{2}} \div$$

(2)
$$D_{1}(x,y) \frac{\partial U}{\partial x} + E_{1}(x,y) \frac{\partial U}{\partial y} + F_{1}(x,y)U = 0$$

The author uses the solution methods for elliptic systems elaborated by Vekua [Ref 2,3], in order to show that under certain suppositions on the coefficients $a(x,y),\ldots,A_1(x,y),\ldots$

the system (1) and the equation (2) possess solutions in every finite simply connected domain G which realize an internal

Card 1/2

On the Mappings Which Correspond to the Solutions of SOV/20-120-1-3/63 Equations of Elliptic Type

mapping of the domain G on a certain Riemannian surface according to Stoylov. In the case (2) the following suppositions must be satisfied: The coefficients $A_1(x,y),\ldots$ must be

analytic in x and y and must be continuable as analytic functions of z=x+iy and S=x-iy into a bicylinder $G_z\times G_z$. There are 3 Soviet references.

ASSOCIATION: Matematicheskiy institut imeni V.A. Steklova Akademii nauk SSSR (Mathematical Institute imeni V.A. Steklov of the Academy of Sciences of the USSR)

PRESENTED: December 16, 1957, by M.A.Lavrent'yev, Academician

SUBMITTED: October 11, 1957

1. Reimann surfaces--Theory 2. Conformal mapping

Card 2/2

AUTHOR:

Danilyuk, I.I.

SOV/20-122-1-1/44

TITLE:

On the Problem With a Skew Derivative for First Order Elliptic Systems (O zadache s kosoy proizvodnoy diya ellipticheskikh sistem pervogo poryadka)

PERIODECAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 1, pp 9-12 (USSR)

ABSTRACT: Let the domain G of the z-plane have the boundary $\Gamma = \sum_{i=0}^{m} \Gamma_{i}$; let

T be simple closed, non-intersecting, H-continuous curves, where T includes all other ones. In G the equation

where
$$\begin{bmatrix} \cdot \\ 0 \end{bmatrix}$$
 includes all other ones. In G the equation G includes all other ones. In G the equation G includes all other ones. In G the equation G includes all other ones. In G the equation G includes all other ones. In G the equation G includes all other ones. In G the equation G includes all other ones. In G the equation G includes all other ones. In G the equation G includes all other ones. In G the equation G is a complex value of G includes all other ones. In G the equation G is a complex value of G includes all other ones. In G the equation G is a complex value of G includes all other ones. In G is a complex value of G includes all other ones. In G is a complex value of G includes all other ones. In G is a complex value of G includes all other ones. In G is a complex value of G includes all other ones. In G is a complex value of G includes all other ones. In G is a complex value of G includes all other ones. In G is a complex value of G includes all other ones. In G is a complex value of G includes all other ones. In G is a complex value of G includes all other ones. In G is a complex value of G includes all other ones.

is considered. Problem B: Find a complex-valued function f continuous in $G + \Gamma$, which in G is the generalized solution of (1), on Γ has a continuously continuable derivative $\frac{1}{\partial z}$ an on Γ satisfies the boundary condition

(2)
$$\operatorname{Re}\left[a\frac{\partial f}{\partial z} + bf\right] = \chi, \quad \frac{\partial}{\partial z} = \frac{1}{2}\left(\frac{\partial}{\partial x} - i\frac{\partial}{\partial y}\right)$$

(a,b, γ are functions defined on Γ). Theorem: In G let B(z) have a generalized derivative B_z \in L_p(G),

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SOV/20-122-1-1/44 On the Problem With a Skew Derivative for First Order Elliptic Systems

p > 2. If f(z) is the solution of the problem B, then the three functions

(3)
$$F_1(z) = f(z)$$
, $F_2(z) = \frac{\partial f(z)}{\partial z}$, $F_3(z) = \overline{f(z)}$

in G satisfy the system

(4)
$$\frac{\partial F_1}{\partial z} = B\overline{F_1}$$
, $\frac{\partial F_2}{\partial z} = B_z\overline{F_1} + |B|^2F_1$, $\frac{\partial F_3}{\partial z} = \overline{F_2}$

and on I they satisfy the conditions

(5) Re
$$\begin{bmatrix} \mathbf{a}\mathbf{F}_2 + \mathbf{b}\mathbf{F}_1 \end{bmatrix} = \mathbf{V}$$
, Re $\begin{bmatrix} \mathbf{F}_1 - \mathbf{F}_3 \end{bmatrix} = 0$, Re $\begin{bmatrix} \mathbf{i}\mathbf{F}_1 + \mathbf{i}\mathbf{F}_3 \end{bmatrix} = 0$.
Conversely: If a system of functions continuous on G+C solves the problem (4),(5), then \mathbf{F}_1 is the solution of the problem B.

Theorem: The homogeneous problem (4)-(5) (i.e. χ = 0) and therewith the homogeneous problem B have only finitely many solutions linearly independent over the field of real numbers. For the solvability of the problem (4)-(5) and consequently the problem B

it is necessary and sufficient that
$$\int_{\Gamma} h(t) \chi_j(t) ds = 0$$
, j=1,2,...

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On the Problem With a Skew Derivative for First Order SOV/20-122-1-1/44 Elliptic System

Here h(t) is defined by the matrix form of the condition (5):

(5*) Re
$$[g(t)F(t)]=h(t)$$
, $g=\begin{pmatrix} b & a & 0 \\ 1 & 0 & -1 \\ 1 & 0 & 1 \end{pmatrix}$, $h=\begin{pmatrix} \vec{0} \\ 0 \\ 0 \end{pmatrix}$,

while χ_j are the solutions of the conjugate system $A^*(\chi) = 0$ if by $A = h_1$ (μ - unknown vector function) the system of singular integral equations is denoted to which (4)-(5) can be reduced with the aid of a certain integral representation. Two further theorems reduce the solvability of the problem B and (4)-(5) to certain conditions for the solutions of the homogeneous problem conjugate to (4)-(5). There are 5 Soviet references.

ASSOCIATION: Matematicheskiy institut imeni V.A. Steklova Akademii nauk SSSR (Mathematical Institute imeni V.A. Steklov of the Academy of Sciences of the USSR)

PRESENTED: April 11, 1958, by I.N. Vekua, Academician

SUBMITTED: April 3, 1958

Card 3/3

AUTHOR: Danilyuk, I.I. 50V/ 20-122-2-3/42

TITLE: Investigation of a Problem With Skew Derivative With the

Aid of a System of Fredholm Equations (Issledovaniye odney zadachi s kosoy proizvodnoy pri pomoshchi sistemy uravneniy

Fredgol'ma)

PERIODICAL: Doklady Akademii nauk SSSR '958, Vol 122, Nr 2, pp 175-178 (USSR)

ABSTRACT: Let D be the unit circle, Γ its boundary, z = x + iy.

f = u + iv, $\frac{\partial}{\partial z} = \frac{1}{2} \left(\frac{\partial}{\partial x} - i \frac{\partial}{\partial y} \right)$, $\frac{\partial}{\partial \overline{z}} = \frac{1}{2} \left(\frac{\partial}{\partial x} + i \frac{\partial}{\partial y} \right)$.

Problem B_{λ} : A function f continuous in D +7 which is gene-

ralized solution of $\frac{\partial f}{\partial z} = \lambda B(z) \frac{f(z)}{f(z)}$ and possesses a deri-

vative which is continuously extendable on [is to be found.

whereby it holds on Γ : Re $\left[a\frac{\partial x}{\partial z} + \lambda bf\right] = \frac{1}{2}$. Here B(z) is

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Investigation of a Problem With Skew 50V/20-122-1-3/42 Derivative With the Aid of a System of Fredholm Equations

a function given in D ; $B_z \in L_p(D)$, p > 2 ; a,b are continuous-ly differentiable functions defined on Γ ; γ is H-continuous- λ a real parameter, $a(t) \neq 0$ for $t \in \Gamma$. Problem C_λ : The generalized solution continuously extendable

on Γ of the system $\frac{\partial F_1}{\partial z} = \lambda B \overline{F}_1$, $\frac{\partial F_2}{\partial z} = \lambda B_z \overline{F}_1 + \lambda^2 |B|^2 \overline{F}_1$,

 $\frac{\partial F_3}{\partial z} \in \overline{F}_2$, is to be found which satisfies on f the condition $\operatorname{Re}\left[\varepsilon_1(t)F(t)\right] = h_1(t)$, where

 $g_{1} = \begin{pmatrix} \lambda_{b} & \mathbf{a} & 0 \\ 1 & 0 - 1 \\ \mathbf{i} & 0 & \mathbf{i} \end{pmatrix}, \quad \mathbf{F} = \begin{pmatrix} \mathbf{F}_{1} \\ \mathbf{F}_{2} \\ \mathbf{F}_{3} \end{pmatrix} \quad , \quad \mathbf{h}_{1} = \begin{pmatrix} \delta^{c} \\ 0 \\ 0 \end{pmatrix}$

The problems B, and C, are equivalent (see [Ref 1]). By relatively simple transformations the system of the problem C_{λ} is brought into a special form. It is shown, that the solution of this special problem satisfies the system of in-

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Investigation of a Problem With Skew S07/20-122-2-3/42
Derivative With the Aid of a System of Fredholm Equations

tegral equations $\varphi(z) = T_{\lambda} \cdot \varphi(z) + \varphi(z)$, and conversely. The spectrum S⁺ of the integral operator T_{λ} is denoted as the spectrum of the problems B_{λ} and C_{λ} (for a nonnegative index \mathcal{X}). Here it is $\mathcal{X} = \text{increase of } \frac{1}{2\pi} \left[\arg \overline{a(t)} \right]$ for a single circulation on Γ in positive direction.

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507/20-122-2-3/42 Investigation of a Problem With Skew Derivative With the Aid of a System of Fredholm Equations

Similar results for 26.40 are given (if λ is an eigen value,

then 1 = 1 or 1 = 2).

There are 5 references, 4 of which are Soviet, and 1 American.

ASSOCIATION: Matematicheskiy institut imeni V.A. Steklova Akademii nauk

SSSB (Mathematical Institute imeni V.A. Steklov of the Academy of Sciences of the USSR)

April 19, 1958, by I.N. Vekua, Academician PRESENTED:

April 14, 1958 SUBMITTED:

Card 4/4

16(1) AUTHOR:

Danilyuk, I.I.

307/20-127-5-4/58

TITLE:

On the Oblique Derivative Problem for the General Quasilinear

Elliptic System of First Order

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 5, pp 953-956 (USSR)

Let the quasilinear elliptic system of first order with the ABSTRACT: unknowns u, v be given in complex form (w = u + iv) :

$$\frac{\partial w}{\partial \overline{z}} + \mu_1(z, w) \frac{\partial w}{\partial z} + \mu_2(z, w) \frac{\partial \overline{w}}{\partial \overline{z}} + \nu(z, w) = 0$$

$$\frac{3}{3z} = \frac{1}{2} \cdot \frac{3}{3z} + i \frac{3}{3z} + i \frac{3}{3z} = \frac{1}{2} \cdot \frac{3}{3z} - i \frac{3}{3z}$$

Let $z\in D$, $w\in \mathbb{R}$. Let on the boundary := of D a differential operator of first order be given

(2)
$$\widetilde{\omega}$$
 (z,u,v,u_x,u_y,v_x,v_y) = Re ω (z,w,w_z,w_z).

Card 1/3

APPROVED FOR RELEASE: 08/25/2000

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5

On the Oblique Derivative Problem for the General COV/20-127-5-4/58 Quasilinear Elliptic System of First Order

Problem F: In the class $W_p^{(1)}(D)$, p>2 there is to be determined a function w satisfying in D the equation (1) and on Γ the boundary condition (2). As in $\int \text{Ref 1,2} / T$ the author formulates a Riemann-Hilbert problem E for certain new unknown functions F_1 , F_2 , F_3 , whereby now the boundary condition contains no derivatives. In theorem 1 the author proves: If w = w(z) is

solution of F, then $F_1 = w$, $F_2 = \frac{\Im w}{\Im z}$, $F_3 = \overline{w}$ are solutions of E; conversely: If F_1 , F_2 , F_3 are solutions of E, then F_1 is solution of F. Then the author restricts himself to the case

 $\omega \equiv a(z) \frac{\partial w}{\partial z} + b(z)w$, where a and b are continuously differentiable on Γ , a $\neq 0$ on Γ . Under certain further assumptions (among others the coefficients of (1) have to satisfy the Lipschitz conditions) it is shown (theorem 2 and 3) that the problem F possesses a unique solution. The author distinguishes two cases

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On the Oblique Derivative Problem for the General Quasilinear Elliptic System of First Order

507/20-127-5-4/58

(in dependence of the sign of $\Re = \frac{1}{2\pi} \left[\arg \overline{a}(z) \right]$).

There are 2 Soviet references.

ASSOCIATION: Institut gidrodinamiki Sibirskogo otdeleniya Akademii nauk SSSR

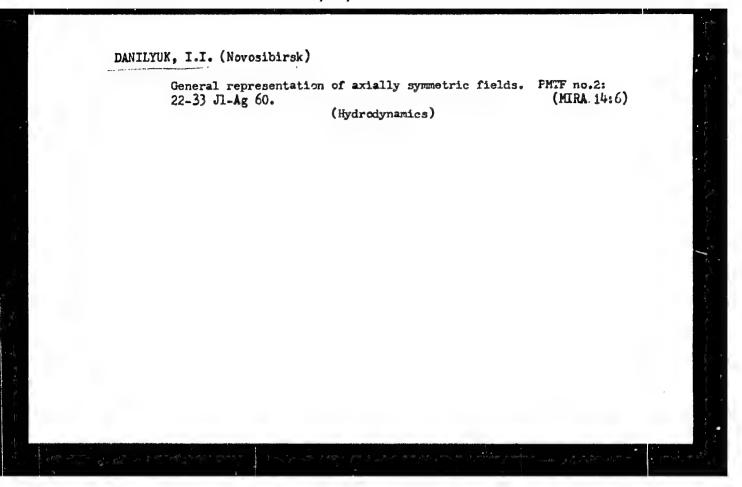
(Institute for Hydrodynamics of the Siberian Department, AS

ÚSSR)

PRESENTED: April 25, 1959, by I.N. Vekua, Academician

SUBMITTED: April 9, 1959

Card 3/3



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3

16.3500

\$/020/60/132/04/03/064

AUTHOR: Danilyuk, I.I.

General Representation of Solutions to Axially Symmetrical

Stationary Problem \0

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 4,pp. 743-746

Theorem 1: Under the assumption

(3)
$$\frac{\partial A(z, \zeta)}{\partial z} - B(z, \zeta)B^{*}(\zeta, z) = -C_{1}(z, \zeta)A(z, \zeta)$$
$$\frac{\partial B(z, \zeta)}{\partial z} - B(z, \zeta)A^{*}(\zeta, z) = -C_{1}(z, \zeta)B(z, \zeta),$$

where $C_1(z, \zeta)$ is a function analytic and regular in $(D_z \times D_q)$, every solution

of the equation (2')

 $\frac{\partial F(z,\zeta)}{\partial \zeta} + A(z,\zeta)F(z,\zeta) + B(z,\zeta)F^{*}(\zeta,z) = 0$

the coefficients of which are analytic and regular in the bicylindric domain $(D_z \times D_e)$, $D_q = D_{\overline{z}}$, can be represented in the form:

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General Representation of Solutions to Axially S/020/60/132/04/03/064 Symmetrical Stationary Problem

(5)
$$F(z,\zeta) = \kappa G(z_0,\zeta_0,z,\zeta) + \int_{z_0}^{z} \varphi(t)G(t,\zeta_0,z,\zeta)dt + \int_{g_0}^{g} \varphi_1(z)G(z_0,\zeta,z,\zeta)d$$
,

where G is the Riemannian function of the equation

(4)
$$\frac{\partial^2 F(z,\zeta)}{\partial z}$$
 + $A(z,\zeta)$ $\frac{\partial F(z,\zeta)}{\partial z}$ + $C_1(z,\zeta)$ $\frac{\partial F(z,\zeta)}{\partial \zeta}$ - 0,

z_o-fixed point of the D_z , $\zeta_0 = z_0$, κ = const. and $\varphi(t)$, $\varphi_1(t)$ are combined by the differential equation

(6)
$$\varphi(z) = -\frac{1}{B^*(\zeta_0, z)} \frac{d\varphi_1^*(z)}{dz} + \frac{1}{B^*(\zeta_0, z)} \left[\frac{\partial B^*(\zeta_0, z)}{\partial z} - C_1(z, \zeta_0) B^*(\zeta_0, z) \right] \varphi_1^*(z),$$

where $\varphi_1(\zeta_0) = -\infty B(z_0,\zeta_0)$ and $B^*(\zeta_0,z) \neq 0$. Reversely: If $\varphi(t)$, $\varphi_1(t)$ satisfy the equation (6), if they are regular in D_z and D_S , respectively, and if $\varphi_1(\zeta_0) = -\infty B(z_0,\zeta_0)$ then (5) is the cord 2/4

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General Representation of Solutions to Axially S/020/60/132/04/03/064 Symmetrical Stationary Problem

solution of (2') for arbitrary values of the constant & [Abstractor's note:

The star is defined by $F^*(\zeta,z) = F(\zeta,\bar{z})$. From this theorem there results in the special case the behavior of the solutions of the hydrodynamic equations (incompressibility, absence of sources and vortices for an axialsymmetric

flow) $\frac{\partial}{\partial x} (rV_x) + \frac{\partial}{\partial r} (rV_r) = 0, \frac{\partial}{\partial x} V_r - \frac{\partial}{\partial r} V_x = 0.$

Putting z = x-ir, $f = V_x + iV_x$, $\frac{\partial}{\partial z} = \frac{1}{2} \left(\frac{\partial}{\partial x} + i \frac{\partial}{\partial r} \right)$, then (1) can be replaced by

(1') $\frac{\partial f}{\partial \bar{z}} - \frac{1}{4ir} f - \frac{1}{4ir} \bar{f} = 0.$

The solution of (1') can be represented by $f(x,r) = F(z,\bar{z})$, where $F(z,\bar{z})$ satisfies the equation

(2)
$$\frac{\partial F(z,\zeta)}{\partial \zeta} = \frac{1}{2} \frac{1}{z-\zeta} F(z,\zeta) - \frac{1}{2} \frac{1}{z-\zeta} F^*(\zeta,z) = 0,$$

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General Representation of Solutions to Axially S/020/60/132/04/03/064 Symmetrical Stationary Problem

which is a specail case of (2'). Theorem 2 describes the relations in this case. The author mentions I.N.Vekua. There are 4 references: 3 Soviet and 1 Italian.

PRESENTED: l'ebruary 1, 1960, by I.N. Vekua, Academician

SUBMITTED: l'ebruary 1, 1960

Card 4/4

MANILYUK, I.f. Hilbert problem with measurable coefficients. Sib. mat. zhur. 1 no.2:171-197 J1-Ag '60. (MIRA 13:12)

16.3500

32456 S/044/61/000/010/020/051 C111/C222

AUTHOR:

Danilyuk, I.I.

TITLE:

On the Poincaré problem for elliptic systems of first order

PERIODICAL: Referativnyy zhurnal. Matematika, no. 10, 1961, 49,

abstract 10 B 212. ("Tr. Vses. soveshchaniya po

differentsial'n. uravneniyam, 1958. Yerevan, AN Arm SSR, 1960, 83-84)

TEXT: In a region D the author considers the boundary value problem for an elliptic system of differential equations of first order

> $\sum_{\alpha=0}^{2} \sum_{k=1}^{2} a_{ik}^{\alpha} \frac{\partial u_{k}}{\partial x^{\alpha}} = f_{i}, \quad i = 1, 2,$ (1)

with the boundary conditions

$$\sum_{k=0}^{2} \sum_{k=1}^{2} b_{k}^{\alpha} \frac{\partial u_{k}}{\partial x^{\alpha} | \Gamma} = V \qquad (2)$$

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3/4/61/000/010/020/051 On the Poincaré problem for elliptic ... C111/C222

If $a_{ik}^{\alpha} \in C^{1}$ then the problem (1)-(2) can be reduced to the problem

$$\frac{\partial f}{\partial z} = B_1 \overline{f}, \quad f = u_1 + iu_2, \quad \frac{\partial}{\partial \overline{z}} = \frac{1}{2} \left(\frac{\partial}{\partial x} + i \frac{\partial}{\partial y} \right).$$

$$R_e \left[af_z + bf \right] = \begin{cases} y, & z \in \Gamma, \\ \frac{\partial}{\partial z} = \frac{1}{2} \left(\frac{\partial}{\partial x} - i \frac{\partial}{\partial y} \right). \end{cases}$$
(B)

where $a=(b_1^1+b_2^2)+i(b_1^2-b_2^1)$, b_1 , b, b are certain functions of the data of the problem (1)-(2). The following theorems are formulated: Theorem 1: If $B \subset L_p(D)$, p>2 then the problem B is equivalent to the problem C:

$$\frac{dF}{dZ} = AF + \overline{BF}, F = \begin{pmatrix} f \\ fz \end{pmatrix}, A = \begin{pmatrix} 0 & 200 \\ 1B_1 & 00 \end{pmatrix}.$$

Card 2/4

32\\\ 56 On the Poincaré problem for elliptic ... C111/C222

$$B = \begin{pmatrix} B_{2} & 0 & 0 \\ B_{1z} & 0 & 0 \\ 0 & 1 & 0 \end{pmatrix}, R_{e}[g(t), F(t)] = h(t), t \in \Gamma ,$$

$$g = \begin{pmatrix} b & a & 0 \\ 0 & 0 & -1 \\ 1 & 0 & 1 \end{pmatrix}, L = \begin{pmatrix} a \\ 0 \\ 0 \end{pmatrix}.$$

The problem

$$\frac{\partial \Psi}{\partial z} = -A'\Psi - B'\Psi$$
, $R_e \left[\frac{dt}{ds}g'^{-1}(t)\Psi\right] = 0$

is called the homogeneous conjugate problem C_0^* . Theorem 2: If $a(t) \neq 0$, $t \in \Gamma$ then the following assertions are valid: a) The problems C_0^* , C_0 (problem with z=0) and the problem B_0 (B with $\gamma=0$) have a finite number of solutions 1^* and 1, respectively, Card 3/4

32\156 \$\044\61\/000\010\020\051

On the Poincaré problem for elliptic ... C111/C222

being linearly independent over the field of real numbers. b) For the solvability of the problem C it is necessary and sufficient that for every solution of the problem C_0^* the integral conditions

$$\int Lh(t)g^{-1}(t)\psi(t)dt = 0$$

are satisfied. Besides: B^* is solvable for every χ^* for $l^* = 0$.

c) It holds $1-1^*=2\chi-3(m-1)$, $\chi=\frac{1}{2n}\left[\arg\left(at\right)\right]_{\Gamma}$, where m+1 is the order of connectivity. It is stated that an analogous problem can be considered on a finite Riemannian surface R with the genus p and with (m+1) boundary contour.

[Abstracter's note : Complete translation.]

Card 4/4

33714

S/199/62/003/001/001/003 B112/B108

16.3700

AUTHOR:

Danilyuk, I. I.

TITLE:

A problem with a directional derivative

PERIODICAL:

Sibirskiy matematicheskiy zhurnal, v. 3, no. 1, 1962, 17 - 55

TEXT: The author considers boundary value problems of the form $\partial w/\partial \overline{z} = g(x,y,u,v,\partial u/\partial x+\partial v/\partial y,\partial v/\partial x-\partial u/\partial y) = g(z,w,\partial w/\partial z)$, Re $h(x,y,u,v,\partial u/\partial x+\partial v/\partial y,\partial v/\partial x-\partial u/\partial y) = \text{Re } h(z,w,\partial w/\partial z) = 0$, where g and h are complex functions which depend on purely real variables. By the substitution $F_1 = w$, $F_2 = \partial w/\partial z$, $F_3 = \overline{w}$, such a problem is reduced to the following one: $\partial F_1/\partial \overline{z} = g(z,F_1,F_2)$, $\partial F_2/\partial \overline{z} = q_1(z,F_1,F_2)\partial F_2/\partial z$

+ $q_2(z, F_1, F_2) \partial \overline{F}_2 / \partial \overline{z} + \nu(z, F_1, F_2), \partial \overline{F}_3 / \partial \overline{z} = \overline{F}_2;$

Re $h(z,F_1,F_2) = 0$, $ke(F_1 - F_3) = 0$, $ke(iF_1 + iF_2) = 0$, where

 $q_1 = (1 - |\partial_E/\partial \overline{F}_2|^2)^{-1}\partial_E/\partial F_2, q_2 = (1 - |\partial_E/\partial F_1|^2)^{-1}(\partial_E/\partial \overline{F}_2)(\partial_E/\partial \overline{F}_2),$

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A problem with a directional ...

3/199/62/003/001/001/003 B112/B108

$$v(z, F_1, F_2) =$$

$$= \left[1 - \left|\frac{\partial g}{\partial \overline{F}_1}\right|^2\right]^{-1} \left[\frac{\partial g}{\partial z} + \frac{\partial g}{\partial F_1} F_2 + \frac{\partial g}{\partial \overline{F}_1} \overline{g} + \frac{\partial g}{\partial \overline{F}_1} \left(\frac{\partial \overline{g}}{\partial z} + \frac{\partial \overline{g}}{\partial \overline{F}_1} \overline{F}_2 + \frac{\partial \overline{g}}{\partial F_2} g\right)\right].$$

The boundary conditions of the second form contain no derivatives of the sought functions. This fact is of great importance. For the solution of such problems, a number of theorems of existence are derived. Vekua N. P. (Obobshchennyye analiticheskiye funktsii - Generalized analytic functions, Fizmatgiz, M., 1959) is referred to. There are 20 references: 17 Soviet and 3 non-Soviet. The reference to the English-language publication reads as follows: Tamarkin J. D. On Fredholm's integral equations, whose kernels are analytic in a parameter, Ann. of Math., 2, Ser. 28 (1947), 127 - 152.

CUBILITIES:

January 27, 1961

Card 2/2

Alter it description of the formula for the formula for $(1/2\pi)^2 = (1/2\pi)^2 = (1/2\pi)^2$

43330

S/020/62/146/003/001/019 B172/B186

AUTHOR:

Danilyuk, I. I.

TITLE:

Study of spatial boundary value problems with axial symmetry

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 3, 1962, 523-526.

TEXT: The elliptic system

$$\frac{\partial}{\partial x} (\mathbf{r} \mathbf{V}_{\mathbf{x}}) + \frac{\partial}{\partial \mathbf{r}} (\mathbf{r} \mathbf{V}_{\mathbf{r}}) = \mathbf{r} \mathbf{G}_{1}(\mathbf{x}, \mathbf{r})$$

$$\frac{\partial}{\partial x} V_{\mathbf{r}} - \frac{\partial}{\partial \mathbf{r}} V_{\mathbf{x}} = G_2(x, \mathbf{r})$$

in a multiply connected unbounded region G of the upper semi-plane $r_{\ast}{\geqslant}0$ is considered. The boundary condition

 $\alpha V_{X} + \beta V_{T} = \gamma$

is set up for that part of the margin which does not lie on r=0; where α , β , γ are given functions. The system is considered in the complex plane "Card 1/2

Study of spatial boundary value ...

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by introducing the field

$$f = V_r + iV_x$$

For the zeros of f a general theorem is proved from which a number of conclusions are derived as to the uniqueness, existence, and properties of the solutions of the homogeneous ($\gamma \leq 0$) and inhomogeneous problems. Among other applications, these can be used in solving the external Neumann problem in the case of axial symmetry.

ASSOCIATION:

Institut gidrodinamiki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Hydrodynamics, Siberian Department of the Academy of Sciences USSR)

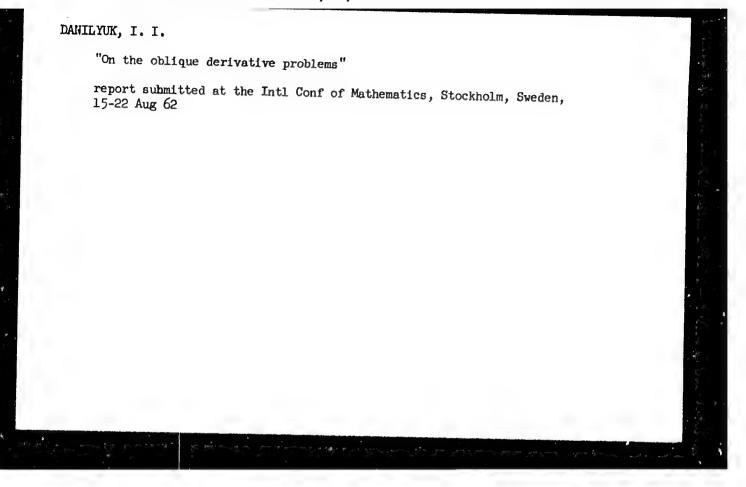
PRESENTED:

April 12, 1962, by I. N. Vekua, Academician

SUBMITTED:

April 9, 1962

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16.4500

S/044/62/000/007/032/100 C111/C222

AUTHOR:

Danilyuk, I.I.

TITLE:

On the theory of one-dimensional singular equations

PERIODICAL: Referativnyy zhurnal, Matematika, no. 7, 1962, 60, abstract 7B287. ("Probl. mekhaniki sploshn. sredy". m.,

TEXT: The operator

$$K^{\circ} \varphi = a(s) \varphi(s) + \pi^{-1} b(s) \left(\begin{bmatrix} 1 - \exp i (s - \mathcal{O}) \end{bmatrix} \varphi(\mathcal{O}) d\mathcal{O} \right)$$

is considered, where the integral is understood in the sense of the Cauchy principal value, while a(s) and b(s) satisfy the conditions:

1.) There exist positive numbers m,M such that the inequalities

$$|a(s)| \leq M$$
, $|b(s)| \leq M$, $|a(s)| \leq M$, $|a(s)| \geq M$, $|a(s)| \geq M$

hold almost everywhere on
$$[0,2\pi]$$
; 2.) there exists a unique branch $\theta(s)$

On the theory of one-dimensional ... S/044/62/000/007/032/100

of the function $\arg \left[(a-b)(a+b)^{-1} \right]$ such that the boundary values $\theta(\tilde{0}-\tilde{0})$, $\theta(\tilde{0}+0)$ exist in every point $\tilde{0}=0.2\%$, where the difference closed at most denumerable point set. $\left\{ \begin{array}{c} a \\ b \end{array} \right\}$ and the series

converges; 3.) $\theta(s) = \theta_0(s) + \theta_1(s)$, where $\theta_0(s)$ is a continuous $2\mathbb{Z}$ periodic function and $\theta_1(s)$ is the function of the jumps of $\theta(s)$. In the paper results are given on the homogeneous equation $K^0 = 0$, $E_p, p > 1$, and on its adjoint equation which have been known up to now only for the case, where a(t), b(t) are continuous and $a^2 = b^2 = 0$ everywhere on $[0,2\mathbb{Z}]$. If $f \in L_p$ and if moreover a certain additional condition is

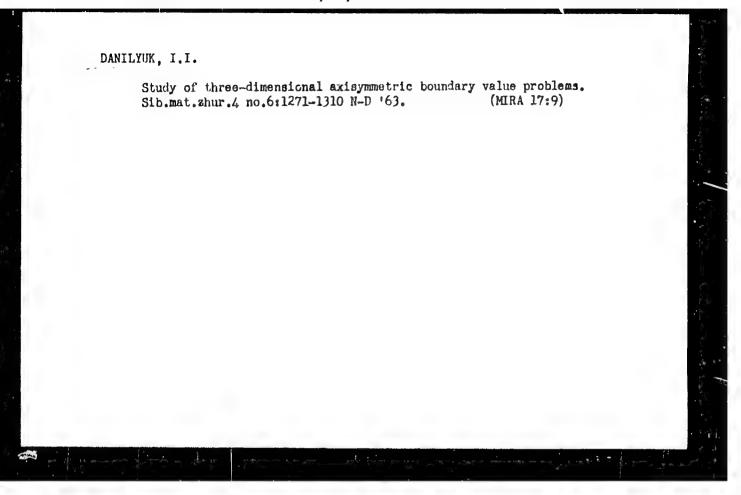
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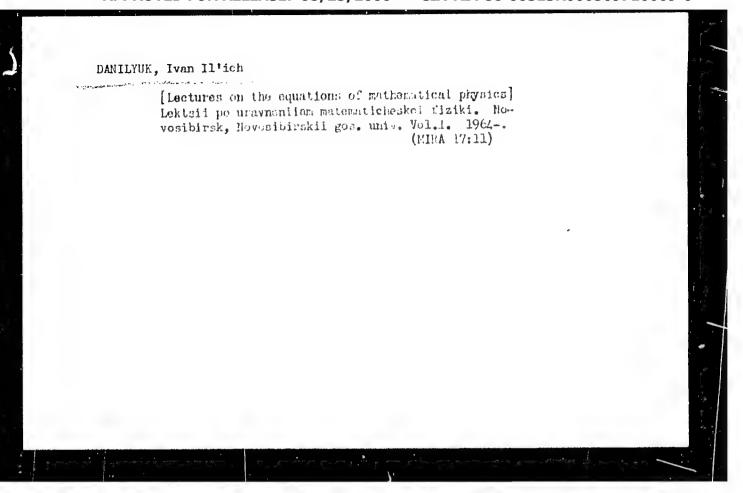
S/044/62/000/007/032/100 On the theory of one-dimensional ... C111/C222 satisfied, then corresponding results are given also for the inhomogeneous equation $K^0 = f$ as well as for $K^0 = f$, where L is a completely continuous operator in Lp.

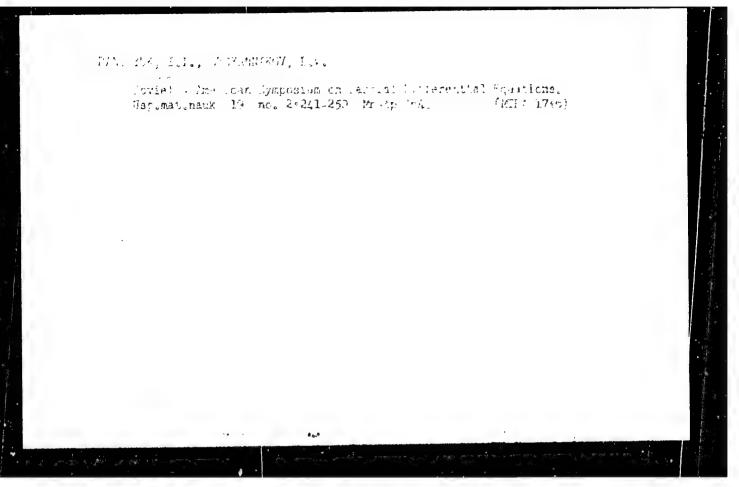
(Abstracter's note: Complete translation.)

\$/199/63/004/001/002/005 AUTHOR: Danilyuk, I. I. B112/B102 TITLE: Generalized Cauchy formula for axially symmetric fields Sibirskiy matematicheskiy zhurnal, v. 4, no. 1, 1963, 48 - 85 PERIODICAL: TEXT: On the basis of the results from a previous paper (Prikl., matem, i tekhn. fizika, No. 2 (1960), 22 - 23) the author constructs, in the semiplane r > 0, kernels $U(z_0, \bar{z}_0, z, \bar{z})$ and $V(z_0, \bar{z}_0, z, \bar{z})$ of a generalized Cauchy's formula $f(x, r) = \frac{1}{2\pi i} \int_{\Gamma} U(z_0, \overline{z_0}; z, \overline{z}) f(x_0, r_0) dz_0 - V(z_0, \overline{z_0}; z, \overline{z}) f(x_0, r_0) dz_0;$ for the Eq. $\frac{\partial f}{\partial \bar{z}} - \frac{1}{4lr} f - \frac{1}{4lr} \bar{f} = 0,$ $f(x,r) = V_r(x,r) + iV_x(x,r), \frac{\partial}{\partial x} = \frac{1}{2} \left(\frac{\partial}{\partial x} + i \frac{\partial}{\partial r} \right).$ (2) which assumes the form $\frac{\partial F(z,\zeta)}{\partial \zeta} - \frac{1}{2} \frac{1}{z-\zeta} F(z,\zeta) - \frac{1}{2} \frac{1}{z-\zeta} \overline{F(\overline{\zeta},z)} = 0,$ $F(z,\zeta)=f\left(\frac{z+\zeta}{2},\frac{z-\zeta}{2l}\right).$ (3):16 Card 1/2

\$/199/63/004/001/002/005 Generalized Cauchy formula ... B112/B102 z = x + ir and $\begin{cases} -x - ir; it satisfies the differential Eqs. \end{cases}$ $\frac{\partial U(z_0, z_0; z, z)}{\partial z_0} - A(z_0, z_0)U(z_0, z_0; z, z) - B(z_0, z_0)V(z_0, z_0; z, z) = 0,$ $\frac{\partial V\left(z_0,\overline{z_0};z,\overline{z}\right)}{\partial z_0}-A\left(z_0,\overline{z_0}\right)V\left(z_0,\overline{z_0};z,\overline{z}\right)-B\left(z_0,\overline{z_0};\overline{z_$ (150) $A(z_0, \overline{z_0}) = B(z_0, \overline{z_0}) = -\frac{1}{2} \frac{1}{z_0 - z_0}, \quad z + z_0.$ and $\frac{\partial U\left(z_0,\overline{z_0};z,\overline{z}\right)}{\partial U\left(z_0,\overline{z_0};z,\overline{z}\right)} + A\left(z,\overline{z}\right)U\left(z_0,\overline{z_0};z,\overline{z}\right) + B\left(z,\overline{z}\right)V\left(z_0,\overline{z_0};z,\overline{z}\right) = 0,$ $\frac{\partial V(z_0, z_0; z, \overline{z})}{\partial V(z_0, z_0; z, \overline{z})} + A(z, \overline{z}) \overline{V(z_0, z_0; z, \overline{z})} + B(z, \overline{z}) \overline{U(z_0, z_0; z, \overline{z})} = 0,$ (153) $A(z,\overline{z}) = B(z,z) = -\frac{1}{2}\frac{1}{z-z}, \quad z \neq z_0.$ (z = x + ir).SUBMITTED: February 27, 1962 Card 2/2



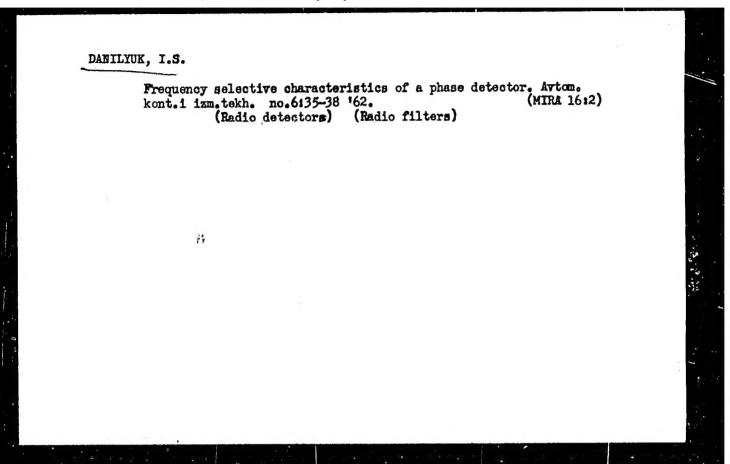




DANILYUK, I.I.

Nonlinear problem with a free boundary. Dokl. AN SSSR 162 no.51979-982 Je 165. (MIRA 18:7)

1. Novosibirskiy gosudarstvennyy universitet. Submitted December 22, 1964.



9.4310

5/651/62/000/006/006/010 E140/E135

AUTHOR:

Danilyuk, I.S.

TITLE:

Experimental study of high-stability transistor phase

detector

SOURCE:

Akademiya nauk Ukrayins'koyi RSR. Instytut

mashynoznavstva i avtomatyky, L'viv. Avtomaticheskiy

kontrol' i izmeritel'naya tekhnika. no.6. 1962. 109-113. The stability of the phase detector is obtained by

using the transistors in inverted connection (collector-emitter interchanged). Four detectors were tested using alloy-junction transistors, under varying conditions of temperature, carrier frequency, etc. Suppression of residual signals improved with increase of frequency, and deteriorated with increase of temperature.

There are 2 figures and 4 tables.

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s/3054/63/000/000/0330/0342

AUTHORS: Vorobkevich, V. Yu.; Danilyuk, I. S.; Sinitskiy, L. A.; Rakov, M. A.; Shumkov, Yu. M.

TITLE: Pulse-width modulated phase detector

SOURCE: Pribory* promy*shlennogo kontrolya i sredstva avtomatiki. Doklady* i soobshcheniya. Kiev, 1963, 330-342

TOPIC TAGS: phase detector, pulse width modulation, transistorized phase detector, second harmonic detector, demodulator, transistorized detector, pulse width modulated detector

ABSTRACT: The operating principles and properties of a second-harmonic detector using transistors operating in the switching mode are analyzed. The operation is based on double conversion of the measured signal. The second-harmonic signal is first mixed with a fundamental-frequency reference voltage. The resultant difference in

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